

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Roger L. Schultz et al.	)	
		)	
		)	Art Unit: unknown
		)	
Serial No.:	unknown	)	
		)	
Filed:	concurrently herewith	)	Examiner: Unknown
		)	
For:	APPARATUS AND METHOD FOR	)	
	CREATING PULSATING FLUID FLOW,	)	
	AND METHOD OF MANUFACTURE FOR)		
	THE APPARATUS	)	

**INFORMATION DISCLOSURE STATEMENT**

ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

SIR:

The following documents are known to Applicants or Applicants' attorneys and are submitted for the Examiner to consider in the above-captioned application.

**U. S. PATENTS**

U.S. Patent No. 3,158,166 issued November 24, 1964 to R.W. Warren.

U.S. Patent No. 3,181,546 issued May 4, 1965 to W.A. Boothe.

U.S. Patent No. 3,181,596 issued May 4, 1965 to R.M. Winnan et al.

U.S. Patent No. 3,247,861 issued April 26, 1966 to P. Bauer.

U.S. Patent No. 3,405,770 issued October 15, 1968 to E.M. Galle et al.

U.S. Patent No. 3,432,102 issued March 11, 1969 to G.L. Turner et al.

U.S. Patent No. 3,423,026 issued January 21, 1969 to K.H. Carpenter.

U.S. Patent No. 3,563,462 issued February 16, 1971 to Peter Baurer.

U.S. Patent No. 3,741,481 issued June 26, 1973 to Peter Baurer.

U.S. Patent No. 4,007,625 issued February 15, 1977 to Heinz Houben et al.

U.S. Patent No. 4,052,002 issued October 4, 1977 to Ronald D. Stouffer et al.

U.S. Patent No. 4,157,161 issued June 5, 1979 to Peter Baurer.

U.S. Patent No. 4,006,755 issued February 8, 1977 to Walter Kranz et al.

U.S. Patent No. 3,998,386 issued December 21, 1976 to Hermann Viets et al.

U.S. Patent No. 4,184,636 issued January 22, 1980 to Peter Baurer.

U.S. Patent No. 4,244,230 issued January 13, 1981 to Peter Baurer.

U.S. Patent No. 4,463,904 issued August 7, 1984 to Harry C. Bray, Jr.

U.S. Patent No. 4,630,689 issued December 23, 1986 to Edward M. Galle et al.

U.S. Patent No. 4,775,016 issued October 4, 1988 to Louis H. Barnard.

U.S. Patent No. 5,135,051 issued August 4, 1992 to David M. Facteau et al.

U.S. Patent No. 5,195,560 issued March 23, 1993 to Muchlis Achmad.

U.S. Patent No. 5,165,438 issued November 24, 1992 to David M. Facteau et al.

U.S. Patent No. 5,228,508 issued July 20, 1993 to David M. Facteau et al.

U.S. Patent No. 5,396,808 issued March 14, 1995 to Bao T. Huang et al.

U.S. Patent No. 5,396,809 issued March 14, 1995 to Bao T. Huang.

U.S. Patent No. 5,505,262 issued April 9, 1996 to Timothy A. Cobb.

U.S. Patent No. 5,893,383 issued April 13, 1999 to David M. Facteau.

U.S. Patent No. RE. 38,013 E issued March 4, 2003 to Ronald D. Stouffer.

U.S. Patent No. 6,606,915 B2 issued August 19, 2003 to Stephane Vannuffelen.

U.S. Patent No. 6,572,570 B1 issued June 3, 2003 to Sean T. Burns et al.

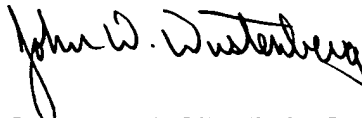
**OTHER MATERIAL**

SPE 13803 entitled "Pressure Fluctuating Tool," by R.A. Payne et al., dated March 1985.

Paper entitled "Experimental And Computational Visualization And Frequency Measurements Of The Jet Oscillation Inside A Fluidic Oscillator," by O. Uzol et al., dated 2001.

Copies of the aforementioned non-patent references and Form PTO-1449 are submitted herewith.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John W. Wustenberg". The signature is written in a cursive, flowing style.

JOHN W. WUSTENBERG  
Registration No. 35,415  
Halliburton Energy Services  
P. O. Box 1431  
Duncan, OK 73536-0440  
580-251-3782

PTO-1449				Application No.		Applicant(s)			
<b>Information Disclosure Citation in an Application</b>				Docket Number HES 2003-IP-012204U1		Group Art Unit		Filing Date	
<b>U.S. PATENT DOCUMENTS</b>									
		<b>DOCUMENT NO.</b>	<b>ISSUE/ PUB. DATE</b>	<b>NAME</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>FILING DATE</b>		
	1	3,158,166	11/24/64	Warren	137	81.5	8/7/62		
	2	3,181,546	5/4/65	Boothe	137	81.5	11/8/62		
	3	3,181,596	5/4/65	Winnan, <i>et al.</i>	160	206	11/29/62		
	4	3,247,861	4/26/66	Bauer	137	81.5	11/20/63		
	5	3,405,770	10/15/68	Galle, <i>et al.</i>	175	56	5/25/66		
	6	3,432,102	3/11/69	Turner, <i>et al.</i>	239	242	10/3/66		
	7	3,423,026	1/21/69	Carpenter	239	284	10/30/67		
	8	3,563,462	2/16/71	Bauer	239	102	11/21/68		
	9	3,741,481	6/26/73	Bauer	239	102	7/19/71		
	10	4,007,625	2/15/77	Houben, <i>et al.</i>	73	23	7/14/75		
	11	4,052,002	10/4/77	Stouffer, <i>et al.</i>	239	4	9/30/75		
	12	4,157,161	6/5/79	Bauer	239	11	9/30/75		
	13	4,006,755	2/8/77	Kranz, <i>et al.</i>	137	831	10/22/75		
	14	3,998,386	12/21/76	Viets, <i>et al.</i>	239	102	2/23/76		
<b>FOREIGN PATENT DOCUMENTS</b>									
		<b>DOCUMENT NO.</b>	<b>DATE</b>	<b>COUNTRY</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>TRANSLATION</b>		
							Yes	No	
<b>NON-PATENT DOCUMENTS</b>									
		<b>DOCUMENT (Including Author, Title, Source, and Pertinent Pages)</b>							
	15	SPE Paper 13803, R.A. Payne, <i>et al.</i> , Pressure Fluctuating Tool, pp. 105-110							
<b>EXAMINER</b>					<b>DATE CONSIDERED</b>				
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.									

PTO-1449				Application No.		Applicant(s)	
<b>Information Disclosure Citation in an Application</b>				Docket Number HES 2003-IP-012204U1		Group Art Unit	Filing Date

U.S. PATENT DOCUMENTS							
		DOCUMENT NO.	ISSUE/ PUB. DATE	NAME	CLASS	SUBCLASS	FILING DATE
	16	4,184,636	1/22/80	Bauer	239	11	12/9/77
	17	4,244,230	1/13/81	Bauer	73	861.19	10/12/78
	18	4,463,904	8/7/84	Bray, Jr.	239	284 R	11/8/78
	19	4,630,689	12/23/86	Galle, <i>et al.</i>	175	56	3/4/85
	20	4,775,016	10/4/88	Barnard	175	56	9/29/87
	21	5,135,051	8/4/92	Facteau, <i>et al.</i>	166	104	6/17/91
	22	5,195,560	3/23/93	Achmad	137	826	4/27/92
	23	5,165,438	11/24/92	Facteau, <i>et al.</i>	137	1	5/26/92
	24	5,228,508	7/20/93	Facteau, <i>et al.</i>	166	177	5/26/92
	25	5,396,808	3/14/95	Huang, <i>et al.</i>	73	861.19	12/28/93
	26	5,396,809	3/14/95	Huang	73	861.19	12/28/93
	27	5,505,262	4/9/96	Cobb	166	312	12/16/94
	28	5,893,383	4/13/99	Facteau	137	14	11/25/97
	29	RE38,013 E	3/4/03	Stouffer	239	284.1	5/4/2000

FOREIGN PATENT DOCUMENTS								
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							Yes	No

NON-PATENT DOCUMENTS			
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	
	30	Paper entitled "Experimental and Computational Visualization and Frequency Measurements of the Jet Oscillation Inside a Fluidic Oscillator, O. Uzol, C. Camci, 4 <sup>th</sup> International Symposium on Particle Image Velocimetry, dated 2001.	

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

PTO-1449  <b>Information Disclosure Citation in an Application</b>	Application No.	Applicant(s)	
	Docket Number HES 2003-IP-012204U1	Group Art Unit	Filing Date

**U.S. PATENT DOCUMENTS**

		DOCUMENT NO.	ISSUE/ PUB. DATE	NAME	CLASS	SUBCLASS	FILING DATE
	31	6,606,915 B2	8/19/03	Vannuffelen	73	861.22	9/1/00
	32	6,572,570 B1	6/3/03	Burns, <i>et al.</i>	601	148	3/26/01

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							Yes	No

**NON-PATENT DOCUMENTS**

		<b>DOCUMENT (Including Author, Title, Source, and Pertinent Pages)</b>	

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.